

Remarks

Claims 1-6 and 8-17 are pending in the application. No amendments are made in this Response. Reconsideration is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-6 and 8-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Valerij et al. This rejection is respectfully traversed.

Applicant respectfully submits that Valerij et al. fail to teach or suggest Applicant's secured transaction system including a tamper-resistant drive and a passive medium (one that lacks any data processing unit) as recited in Applicant's claims. Specifically, Applicant's claim 1 recites, "each information carrier having a passive data storage medium but lacking any data processing unit" and "a tamper-resistant drive for reading and writing information related to transactions on an information carrier...said tamper-resistant drive having a control unit executing secure protocols for mediating communication between said host computer and tamper-resistant drive and between said tamper-resistant drive and information carrier"

In contrast, Valerij et al. disclose a data carrier with an electronic circuit for storing and processing data. Throughout the Valerij et al. reference, it is stated that a data carrier with an electronic circuit for storing and processing data is provided in the present invention. Specifically, the first two lines of the Abstract, indicates that a data carrier with an electronic circuit for storing and processing data is provided. Additionally, the Field of Invention Section of the cited reference, states "[t]he invention relates generally to a data carrier of the type having an electronic circuit for storing and processing data...." Valerij et al., col. 1, lines 8-9. Further, Valerij

et al. states that data carriers with electronic circuits are suitable for cashless payment services and for electronic identity media. Valerij et al., col. 1, lines 15-20. Further, Valerij et al. state of the data carriers of the type described above that "[a]s they are provided with an electronic circuit for storing and processing data, as well as for communication with a write/read device, they are also known for example as chip cards or smart cards, and so on." Valerij et al., col. 1, lines 20-24.

Valerij et al. fail to teach or suggest modification of the data carrier including an electronic circuit for processing data to a passive medium lacking any data processing unit, as recited in Applicant's claims. Valerij et al. did not contemplate use of a passive medium. Applicant respectfully submits that the disclosure of Valerij et al. fail to warrant modification of the data carrier having an electronic circuit for processing data to a passive medium lacking any data processing unit, as recited in Applicant's claims. "Modification unwarranted by the disclosure of a reference is improper." *Schenck v. Nortron Corp.*, 218 USPQ 698, 702 (Fed. Cir. 1983).

Further, Valerij et al. fail to teach or suggest a tamper-resistant drive and a drive having the characteristics of Applicant's recited drive as quoted above from Applicant's claim 1. Valerij does not teach or suggest use of a tamper-resistant drive. Further, Valerij does not teach or suggest a drive having a control unit executing secure protocols between a host computer and the drive and between the drive and the data carrier of Valerij. Additionally, Valerij et al. fail to teach or suggest a cryptographic processing unit providing encryption and decryption in accord with secure protocols executed by said control unit. Valerij et al. were not concerned with security mechanisms for a secure transaction system for a passive medium as Valerij et al. only

contemplated use of a non-passive medium, i.e. the data carrier having an electronic circuit for data processing.

In contrast to Valerij et al., Applicant was concerned with a system for secure transactions utilizing a passive medium. Applicant indicates in the section of Applicant's specification entitled "Background Art" that it is known that secure transactions may be carried out with cards including processors however, the problem lies in providing a system in which secure transactions may be carried out with a passive storage medium. Specifically, Applicant's specification recites, "secure transactions may be carried out when using a smart card, which has an embedded microprocessor chip in it." Applicant's specification as filed, page 2, lines 25-27. "In contrast, passive storage media, such as optical memory cards (OMCs), memory chip cards, compact disks (CD-R and CD-RW), or magnetic media, don't have a microprocessor chip. While they have large memory capacity useful for storing complete transaction records, they have not been deemed sufficiently secure for transaction applications like e-commerce." Applicant's specification, page 2, lines 30-36. "But in a system using passive storage media, software/firmware protocols and encryption of the data stored on the media will not be enough to secure adequate security. Other system security components will be needed to prevent interception of decrypted data at any weak link in the transaction system and access to the encryption/decryption keys will need to be denied to all but authorized persons. To date, such security measures have been unavailable to systems that use passive storage media, and, thus in comparison to smart cards. The passive media systems have been deemed too insecure for those transactions which are vulnerable to fraud or forgery (e.g., financial transactions):" Applicant's specification, page 3, lines 6-18. Valerij could not contemplate providing a passive media security system secure enough for use for those transactions which are vulnerable to

fraud in that they do not contemplate the use of passive media.

For at least the reasons that the cited references fail to teach or suggest elements of claim 1, Applicant respectfully submits that the cited references fail to render claim 1 obvious. As claims 2-6 and 8-17 depend, either directly or indirectly from claim 1, they are non obvious over the cited reference for at least the reasons provided with regard to claim 1.

The Examiner appears to agree with Applicant that Valerij et al. fail to teach or suggest a passive medium lacking any data processing unit card and a tamper resistant drive, as claimed by Applicant. However, the Examiner looks outside of the Valerij et al. reference to his own knowledge to modify the reference. The Examiner states:

Valerij discloses the carrier having a processing circuit (column 1, lines 8-9), which carries out cryptographic functions for the system. The circuit exists in the card, as opposed to being in the drive, to authenticate the drive (column 5 lines 57-65). *Removing this security check in a secure system, with tamper-resistant drives to save money would be obvious to one of ordinary skill in the art.* The examiner takes official notice that tamper-resistant drives are used to add security to a system. It would have been obvious for one of ordinary skill in the art to implement a tamper-resistant drive in the system disclosed by Valerij to add security, and to allow for cheaper carriers to be needed. Office action, at 3 (emphasis added).

Applicant wishes to draw the Examiner's attention to the Examiner's statement of "[r]emoving this security check in a secure system, with tamper-resistant drives to save money would be obvious to one of ordinary skill in the art", recited in the Office action and quoted above. Applicant respectfully submits that the Examiner appears to rely on his own knowledge to support the assertion that money would be saved by removing the security check including the electronic circuit of the

card and the non-tamper resistant drive. In response, Applicant traverses the Examiner's assertion that money would be saved by removing the security check. Under MPEP section 2144.03, if an Applicant traverses an assertion that teachings are well known or matters of common knowledge in the art, the Examiner should cite a reference in support of his or her position.

Further, Applicant respectfully submits that modifying the Valerij et al. cited reference in the manner described by the Examiner, specifically, replacing the write/read device of Valerij et al. with a tamper resistant drive and removing the electronic circuit of the card, would change a principle of operation of the cited reference. A principle of operation of Valerij et al. is to authenticate the write/read device 19 through the use of a data carrier having an electronic circuit for processing data. Specifically, the cited reference states:

[T]he write/read device 19 encodes a random number according to known methods, for example the DES (Data Encryption Standard) and sends it too, in encoded and non-coded form to the data carrier 1. The electronic circuit 2 of the data carrier 1 is set up to decode the random number transferred encoded and to compare it with the random number transferred non-coded. The transmission of the test number P and/or other data Dp to the write/read device 19 occurs only when the encoded random number is the same as the non-coded random number. Interrogation of the data carrier 1 by an unauthorized write/read device 19 is impossible because of this simple test of authenticity." Valerij et al., col. 5, lines 52-65.

Authentication of the drive is a principle of operation of Valerij. By removing the electronic circuit from the optical data card and replacing the write/read drive of Valerij with a tamper-resistant drive, authentication of the drive, a principle of operation of Valerij would not occur and would be changed.

The M.P.E.P. explicitly states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. M.P.E.P. § 2143.01, 2100-132 (Rev. 2 May 2004) (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Therefore, for this reason, the reference cannot be modified as contemplated by the Examiner.

Accordingly, for at least these reasons, claims 1-6 and 8-17 are non obvious over the cited references and the Examiner's statement.

Conclusion

For at least these reasons, Applicant respectfully submits that claims 1-6 and 8-17 are in condition for allowance. Accordingly, a Notice of allowance is respectfully requested.

CERTIFICATE OF MAILING

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

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